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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,418	06/05/2001	Herbert Benson Scher	RIA 57700	5799

26748 7590 03/27/2007  
SYNGENTA CROP PROTECTION, INC.  
PATENT AND TRADEMARK DEPARTMENT  
410 SWING ROAD  
GREENSBORO, NC 27409

EXAMINER
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FUBARA, BLESSING M

ART UNIT	PAPER NUMBER
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1618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/873,418	<b>Applicant(s)</b> SCHER ET AL.	
	<b>Examiner</b> Blessing M. Fubara	<b>Art Unit</b> 1618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-31 and 33-44 is/are pending in the application.
- 4a) Of the above claim(s) 33, 35, 36, 38 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-31, 34, 37 and 40-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Examiner acknowledges receipt of request for reconsideration and remarks filed 12/13/2006. Claims 28-31 and 33-44 are pending. Claims 33, 35, 36, 38 and 39 are withdrawn from consideration.

**Previous rejections that are not reiterated herein are withdrawn.**

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 28-31, 34, 37 and 40-42 remain rejected under 35 U.S.C. 102(b) as being anticipated by Mikami et al. (US 4,465,756).

Mikami discloses polyurea or polyurethane polythiourea capsule shell and a process of preparing the shell (column 4, lines 27-61); the shell material is a polycondensation product of polyisocyanate, polyol and water or polycondensation product of polyisocyanate, polyol and polyamine (column 4, lines 62-65); droplets of toner particles and dye materials are encapsulated in the core of the capsule shell (abstract; column 4, lines 66-68; column 5, lines 8-11; column 8, lines 20-43; column 10, lines 16-50). The outer surface of the shell is provided with surface active agent selected from the group consisting of sulfonate, carboxylate, phosphate, amine, quaternary ammonium salt and pyridinium salt (column 3, lines 60-65). The surface-active

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agents can be anionic and an example is sodium tetradecylamidophenylsulfonate (column 11, lines 49-57), which reads on the sulfonate polyester polyol.

***Response to Arguments***

3. Applicant's arguments filed 12/13/06 have been fully considered but they are not persuasive.

Applicant states that the rejection addresses sulfonate polyester polyol while the claimed resin is not a sulfonate polyester resin.

**Response:**

Claim 28 is directed to encapsulated product enclosed within a solid permeable shell of a polymer resin, the polymer resin is made by a) isocyanate polymerization, the polymer resin has incorporated therein at least one surface modifying compound having a moiety -X. X is defined on page 3 of the claims as a hydroxyl, thiol, and amine group. The isocyanate of the claim is generic and any specific isocyanate such as the isocyanate of Mikami anticipate the generic isocyanate. Polyols have hydroxyl groups and anticipates the generic hydroxyl or the claims. Thus, the polycondensation product of polyisocyanate, polyol and water or polycondensation product of polyisocyanate, polyol and polyamine meets the broad claim 28 (a). Mikami discloses a polyurethane or polyurea or polythiourethane shell encapsulating a toner material, the polymer forming the shell is "produced by the polycondensation reaction between polyisocyanate and/or polythioisocyanate and one or more of the counterpart compounds such as polyol, polythiol, water, polyamine and piperazine" (column 4, lines 44-47). Claim 28(a) has no Z limitation. Same starting material undergoing the same reaction would produce the same product.

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4. Claims 28, 29, 34 and 40-43 remain rejected under 35 U.S.C. 102(b) as being anticipated by Seitz et al. (US 5.925,595).

Seitz discloses a process of preparing a microencapsulated composition and the method comprises combining triisocyanate, aliphatic diisocyanate and polyamine and incorporating agricultural chemical such as herbicide within the microcapsule (abstract; column 2, line 21 to column 4 line 20). Sulfonated naphthalene-formaldehyde condensates, modified starches (column 4, lines 10-20) and calcium and sodium lignosulfonates (column 8, lines 13 and 14) are colloids that are included in the polyurea shell.

***Response to Arguments***

5. Applicant's arguments filed 12/13/06 have been fully considered but they are not persuasive.

Applicant asks that the examiner identify X and Z in the Seitz and that the prior art does not disclose sulfonate polyester polyol.

**Response:**

It is noted that claim 28 (a) does not have a Z. Specifically claim 28 (a) is directed to encapsulated product enclosed within a solid permeable shell of a polymer resin, the polymer resin is made by a) isocyanate polymerization, the polymer resin has incorporated therein at least one surface modifying compound having a moiety -X. X is defined on page 3 of the claims as a hydroxyl, thiol, and amine group. X is not a number (see claim 28 at page 3 of the claims filed 12/13/06. Claim 28 (a) has no Z limitation. The capsule wall of Seitz is a polymerization product prepared by polymerization of triisocyanate, aliphatic diisocyanate and polyamine, herbicide is encapsulated. The specific isocyanate meets the generic isocyanate of the claims.

The polyamine of Seitz is the -X of the claim. Same starting material undergoing the same reaction would produce the same product.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 44 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami et al. (US 4,465,756).

Mikami is described above. Mikami does not disclose the specific ratio of the total -NCO moieties in the wall-forming material to the total reactive moieties in the surface-modifying compound. However, there is no demonstration that the recited ratio provides unexpected result to the resin formed by the reaction. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the composition of Mikami according to the process of Mikami. One having ordinary skill in the art would have been motivated to use the specific amounts of the isocyanate compound and the surface-modifying agent that is expected to yield the desired resin for encapsulating the active agent.

***Response to Arguments***

Applicant states that Examiner failed to comment on applicant's remarks filed 6/21/06. The main point raised in the remarks was that structure IV was not anticipated by tetradecylamidophenylsulfonate and that the modification of Mikami would not produce

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structure IV. In response, it was noted that because claim 28 (a) is one aspect of the claims, the rejection was made in consideration of that aspect of the claim. The difference between claim 44 and Mikami is the ratio of the isocyanate and the -X, which is also the difference between claim 28 and 44. It is further noted that claim 44 (a) is examined since part a is still part of the claim. X is not a number and as such does not have a value. It is further noted that Seitz discloses that the aliphatic diisocyanate contains cycloaliphatic or aromatic ring moiety, the diisocyanate having from 6-32 carbon atoms or 8-18 (abstract) so that at carbon 6 and aromatic, the diisocyanate would be phenylene diisocyanate. Thus, using amounts of the isocyanate compound and the surface-modifying agent X that is expected to yield the desired resin for encapsulating the active agent, would produce a polymer resin that meets all the limitations of claim 44 (a). Same starting material undergoing the same reaction would produce the same product.

No claim is allowed.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 272-0594. The examiner can normally be reached on 7 a.m. to 5:30 p.m. (Monday to Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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